



PATENT
Docket No.: 176/60981 (6-11402-1001)

1652
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Mahin D. Maines)	Examiner:
Serial No. : 10/045,545)	Sheridan L. Swope
Cnfrm. No. : 1814)	Art Unit:
Filed : January 14, 2002)	1652
For : METHODS OF MODIFYING CELL STRUCTURE AND REMODELING TISSUE)	

RESPONSE TO RESTRICTION REQUIREMENT

U.S. Patent and Trademark Office
P.O. Box 2327
Arlington, VA 22202

Dear Sir:

In response to the September 16, 2002, written restriction requirement,
applicant hereby elects Group III (i.e., claims 1, 2, and 8-12) with traverse.

Applicant submits that restriction as between claims 1-12 (i.e., among Groups I, II, and III) is improper. The U.S. Patent and Trademark Office ("PTO") has included within each of Groups I-III claims 1, 2, 11, and 12. Each of these claims is a generic (claim 1) or subgeneric (claims 2, 11, and 12) linking claim.

Claim 1 is a generic claim reciting a "method of modifying cell structure" that includes "increasing the intracellular concentration of biliverdin reductase, or a fragment or variant thereof, in a mammalian cell under conditions effective to modify the structure of the mammalian cell." Claim 2 is a dependent subgeneric claim that defines the modified cell structure as "enhanced cell size, actin microspike formation, polar cell morphology, or a combination thereof." Claims 11 is a dependent subgeneric claim that defines the mammalian cell whose structure is modified as "a stem cell, a neuronal or glial cell, a vascular smooth muscle cell, a skeletal muscle cell, an epithelial cell, or a nucleated blood cell." Claim 12 is a dependent subgeneric claim reciting that the mammalian cell whose structure is modified is located *in vitro*. Because all of claims 1, 2, 11, and 12 link together the inventions of Group I (use of fusion protein containing biliverdin reductase ("BVR") and

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receptor ligand), Group II (use of fusion protein containing BVR and polymer), and Group III (use of nucleic acid encoding BVR), these claims should be designated as linking claims and treated in a manner consistent with MPEP § 809. Thus, none of the linking claims should be included within a particular group of invention; instead, claims 1, 2, 11, and 12 should be separately identified as linking claims. Pursuant to MPEP § 809.03, if one of these linking claims is deemed allowable, then restriction as between the inventions of Groups I, II, and III is improper and all linked inventions should be joined together for search and examination.

Moreover, applicant submits that the invention of Groups I, II, and III are closely related and, therefore, require common areas of search and consideration. Since no benefit is derived from imposing this restriction requirement, it should be withdrawn with respect to Groups I, II, and III.

In response to the election of species requirement, applicant hereby elects with traverse the following species: actin microspike formation as the modified cell structure and epithelial cell as the cell type. Claims reading on actin microspike formation include claims 1, 2, and 8-12. Claims reading on epithelial cells include claims 1, 2, and 8-12. Claims reading on both of the elected species include claims 1, 8-10, and 12. Applicant hereby traverses the election of species requirement on the basis that each of the elected species can be searched without significant burden to the PTO. Therefore, there is no basis for requiring an election of species.

In view of the foregoing, applicant respectfully requests examination of claims 1-12 in their entirety in view of the above elections and their traversal.

Respectfully submitted,


Edwin V. Merkel
Registration No. 40,087

Date: October 15, 2002

NIXON PEABODY LLP
Clinton Square, P.O. Box 31051
Rochester, New York 14603
Telephone: (585) 263-1128
Facsimile: (585) 263-1600

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: U.S. Patent and Trademark Office, P.O. BOX 2327 Arlington, VA 22202, on the date below.	
Date <i>10/15/02</i>	Wendy L. Barry <i>Wendy L. Barry</i>